

U.S.S.N.: 09/821,573

In the Claims:

Please rewrite Claims 1, 12, 14, and 24 in their entirety as follows (the changes in these Claims from the previous version to the rewritten version are shown in Appendix A, with strikethroughs for deleted matter and underlines for added matter):

1. (AMENDED) A backup power supply system for a restraint control module, comprising:

- a main power source connected to a backup power source charging circuit and said restraint control module;

- a backup power source connected to said backup power source charging circuit and said restraint control module;

- a boost converter control and driver circuit connected to a boost converter switching device that is connected to said backup power source charging circuit, wherein said boost converter control and driver circuit turns said boost converter switching device on and off at a predetermined duty cycle to charge said backup power source with said backup power source charging circuit during normal power operation; and

- a backup power supply control and driver circuit connected to a backup power supply switching device that is connected to said backup power source, wherein said backup power supply control and driver circuit uses said backup power supply switching device to switch the source of power to said restraint control module from said main power source to said backup power source during a loss of power from said main power source.

12. (AMENDED) A backup power supply system for a restraint control module, comprising:

- a main power source;

- a backup power source charging circuit connected to said main power source;

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a backup power source connected to said backup power supply charging circuit;

first means for switching, at a predetermined duty cycle, said backup power supply charging circuit to charge said backup power source during normal power operation; and

second means for switching the power being supplied to said restraint control module from said main power source to said backup power source in the event said main power source experiences a loss of power.

14. (AMENDED) The backup supply system of claim 12, wherein said first means comprises a boost converter control and driver circuit connected to a boost converter switching device, wherein said boost converter control and driver circuit turns said boost converter switching device on and off at a predetermined duty cycle to charge said backup power source with said backup charging circuit during normal power operation.

24. (AMENDED) A backup power supply system for a restraint control module, comprising:

powering said restraint control module with a main power source during normal operation;

sensing power on said main power source with main power monitoring circuit;

providing a boost converter control and driver circuit connected to a boost converter switching device;

charging a backup power source with a backup power source charging circuit connected to said main power source and said boost converter switching device, wherein said boost converter control and driver circuit switches said boost converter switching device on and off at a predetermined duty cycle to thereby transfer energy to said backup power source when said main power source is operating within a predetermined nominal voltage range; and